

HOW TO USE THIS ATLAS

Introduction

The communities of the Portland metropolitan region take a collaborative approach to planning that helps make our region one of the most livable in the country. Over the last two decades of the 20th Century, we worked together to address the challenges to metropolitan mobility brought about by exceedingly rapid population growth. With the dawn of the 21st Century came a new set of challenges. Although population growth has slowed, it remains steady. In addition, climate change, rising energy costs, aging infrastructure, and other economic concerns demand that our region again proactively plan to preserve metropolitan mobility. The goal is to provide the goods and services that people need and protect what they value—a strong economy, a healthy environment, and livable communities. Achieving these goals requires an integrated approach to metropolitan mobility.

As part of the first phase of the 2035 Regional Transportation Plan (RTP), the mobility corridor concept emerged as a new way to think about an integrated transportation system. This concept focuses on the region's network of freeways and highways and includes parallel networks of arterial streets, regional multi-use paths, high capacity transit and frequent bus service. The function of this network of integrated transportation corridors is metropolitan mobility – moving people and goods between different parts of the region and, in some corridors, connecting the region with the rest of the state and beyond. These transportation corridors also have a significant influence on the development and function of the land uses they serve.

Purpose of the mobility corridor atlas

In the first phase of the RTP update, regional partners identified 23 mobility corridors across the region. The next step is to better understand the unique land use and transportation characteristics of each corridor.

The mobility atlas, the first of its kind created for this region, was conceived as a way to visually present current land use and multi-modal transportation data for each of the region's major travel corridors. It is designed primarily to help planners and decision-makers understand existing system conditions, identify needs and prioritize mobility investments. Cities and counties will find the atlas useful when updating their transportation system plans after the RTP update. In addition, freight movers, community development interests and members of the interested public will benefit from a better understanding of the region's transportation system.

For each corridor, the atlas provides a general overview that includes location in the region, primary transportation facilities and land use patterns, and an assessment of gaps and deficiencies by travel mode. This information will be used to help identify the most cost-effective strategies and investment priorities for each corridor and serve as a framework for monitoring how well different strategies are working in each corridor over time. The atlas also provides for the comparison of data between corridors and the ability to merge multiple corridors for analysis of broader travel areas.

Content of the mobility corridor atlas

This mobility atlas presents a series of maps for each corridor showing its geographic location, transportation facilities, adjacent land use patterns, and current operational attributes. The maps are accompanied by short explanatory narratives, data tables and “quick facts.” Data for the atlas include 2005 modeled data derived from Metro's regional travel demand model, land use and transportation Geographic Information System (GIS) data from Metro's Regional Land Inventory System (RLIS), 2007 bridge inventory data from the Oregon Department of Transportation and policy data from the federal component of the 2035 RTP. This atlas is draft 1.0; it will receive periodic corrections and updates as new information emerges or inaccuracies surface.

Definition of terms

Mobility means the movement of people, freight, goods and services by any travel mode.

Mobility corridor means a segment of the regional network of freeways and highways that also has parallel facilities including arterial and collector streets, high capacity and regional transit routes, and regional multi-use paths.

High capacity transit means all public mass transit that moves in a dedicated right of way or designated lane and operates with a minimum of stops. Examples include commuter rail, light rail, bus rapid transit, and some express bus routes.

Level of service (LOS) is a tool for evaluating system performance and identifying deficiencies for roadways, transit and other motorized and non-motorized modes of travel. It describes conditions in terms of speed and travel time, freedom to maneuver, and traffic interruptions.

LOS C – stable flow with delays, less freedom to maneuver

LOS D – high density but stable flow

LOS E – operating conditions at or near capacity, unstable flow

LOS F – forced flow, breakdown conditions

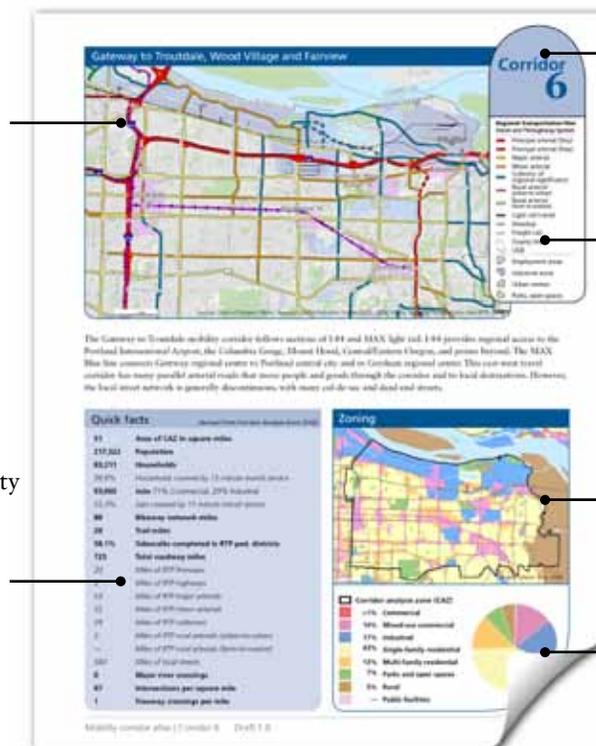
LOS F+ – severe congestion, demand exceeds capacity.

2040 target areas are identified in the 2040 Growth Concepts as priorities for the transportation system to support growth. These 2040 target areas include central city, regional centers, industrial areas, freight and passenger inter-modal facilities, employment areas, town centers, station communities, corridors, and main streets.

USER GUIDE

The following diagrams are included to serve as a guide to understanding the maps and charts in the mobility atlas. Each chapter contains the same elements that have been modeled to provide content specific to the corridor.

This map shows the Regional Transportation Plan (RTP) functional classifications for the Street and Throughway System.



This identifies the beginning section of a specific transportation corridor. The region has been divided into 23 different mobility corridors.

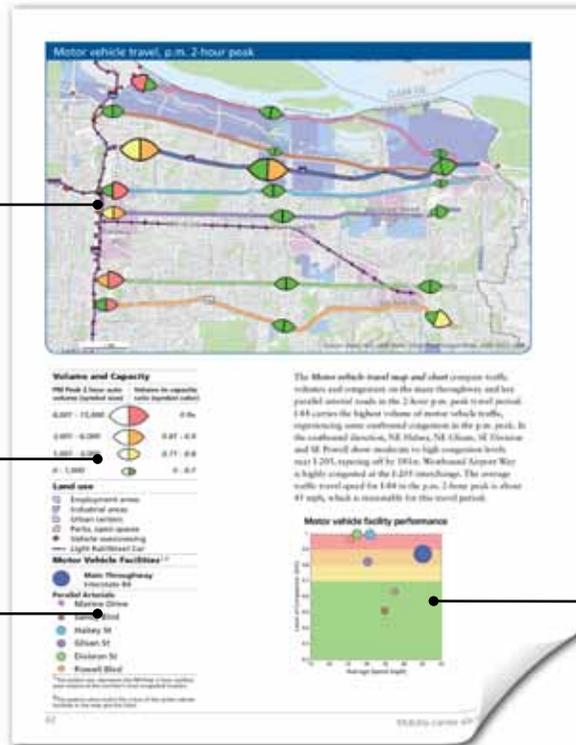
This is the legend for the Regional Transportation Plan Street and Throughway System map.

The *Zoning* map shows the zoning designation boundaries based on local zoning ordinances. It also shows the extent of the mobility corridor.

This chart reflects the percentages of zoning designations within the mobility corridor.

These quick facts represent a variety of data that has been aggregated based upon the Corridor Analysis Zone for the specific corridor.

The *Motor vehicle travel* map shows the modeled p.m. 2-hour peak motor vehicle volumes and the volume-to-capacity ratio for select cutlines on the main throughway and parallel arterials. The symbol orientation reflects the direction of travel while the symbol size indicates the volume and the symbol color shows the volume-to-capacity ratio.

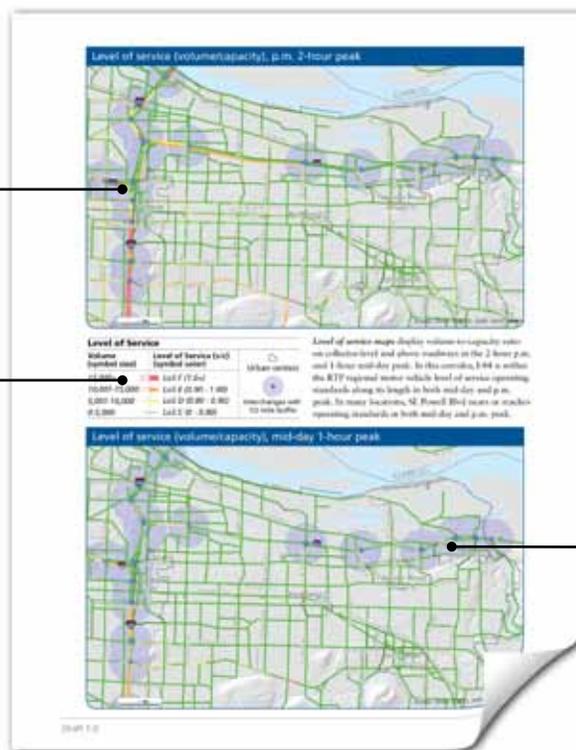


This legend shows the categories for the modeled p.m. 2-hour peak motor vehicle volumes and the volume-to-capacity ratio in the map above.

The main throughway and parallel Arterials are color-coded to match the map above and the chart on the right. The size of the circles match the relative volume at the most congested cutline.

The *Motor vehicle facility performance* chart reflects the modeled average speed, level of congestion and the relative volumes for the main throughway and parallel arterials in the map above. The size of the symbols indicates the volume at the corridor's most congested cutline and the position on the chart indicates the level of congestion and average speed. Average speed is calculated along the length of the colored facility on the map. The circles are color-coded to match the main throughway and parallel arterials in the map above.

The *Level of service* map shows the modeled volume-to-capacity ratio on collector-level and above roads in the 2 hour p.m. peak travel period. The width of the link indicates volume and the color reflects the Level of Service. Freeway interchanges are shown with a 1/2-mile buffer.

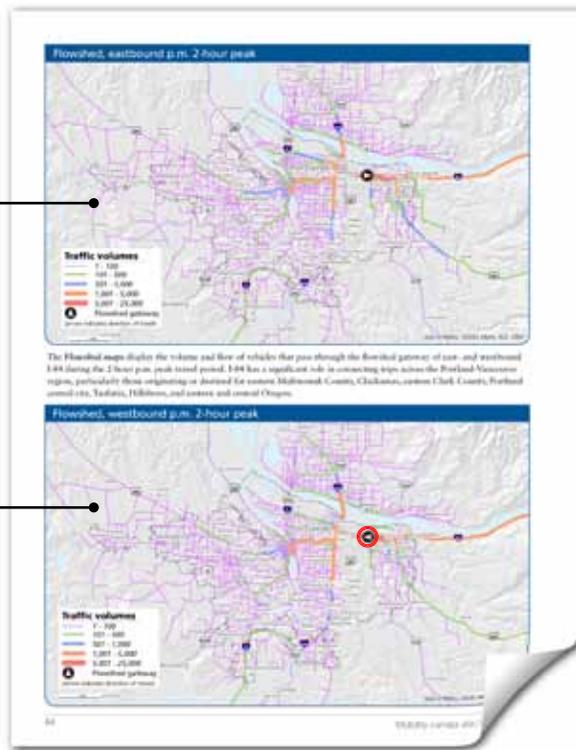


This legend shows the regional Level of Service standard classifications by color, and volume classifications by line width.

The *Level of service* map shows the modeled volume-to-capacity ratio on collector-level and above roads in the mid-day 1 hour peak travel period. The width of the link indicates volume and the color reflects the Level of Service. Freeway interchanges are shown with a 1/2-mile buffer.

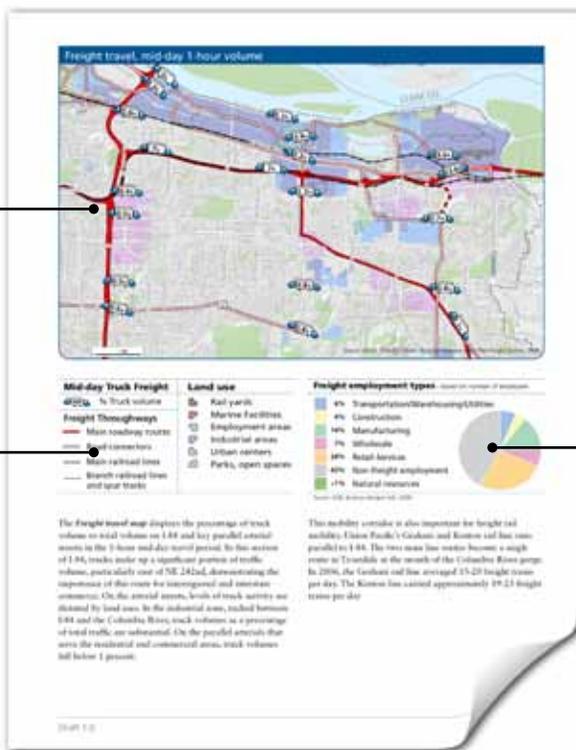
The *Flowshed* maps display the modeled travel patterns of motor vehicle traffic that pass through the flowshed gateway of the Main Throughway during the 2-hour p.m. peak period. They indicate travel origins and destinations along with traffic volumes on the roadways.

The travel direction is indicated by the arrow on the flowshed gateway symbol.



The *Truck travel* map displays the modeled bi-directional percentage of truck volume to total volume on the main throughway and key parallel arterials during the 1-hour mid-day travel period. This map also shows the RTP Freight System classifications and freight-related land uses.

This legend indicates the RTP Freight System classifications and freight-related land uses.

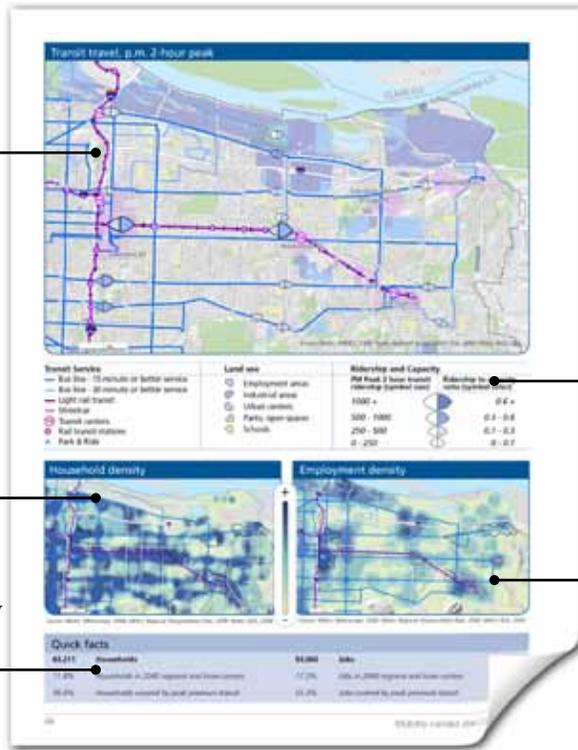


This chart shows the percentages of *Freight employment* types based on the total number of employees within the mobility corridor.

The *Transit travel* map displays the modeled p.m. 2-hour peak transit ridership and the ridership-to-capacity ratio for select cutlines on the main throughway and parallel arterials. The symbol orientation reflects the direction of travel while the size indicates the level of ridership and color is used to show the ridership-to-capacity ratio.

The *Household density* map shows the overall density of households as a color gradient, such that the deeper blue color has a higher density of households.

These quick facts represent a variety of household and employment data that has been aggregated based upon the Corridor Analysis Zone for the specific corridor.

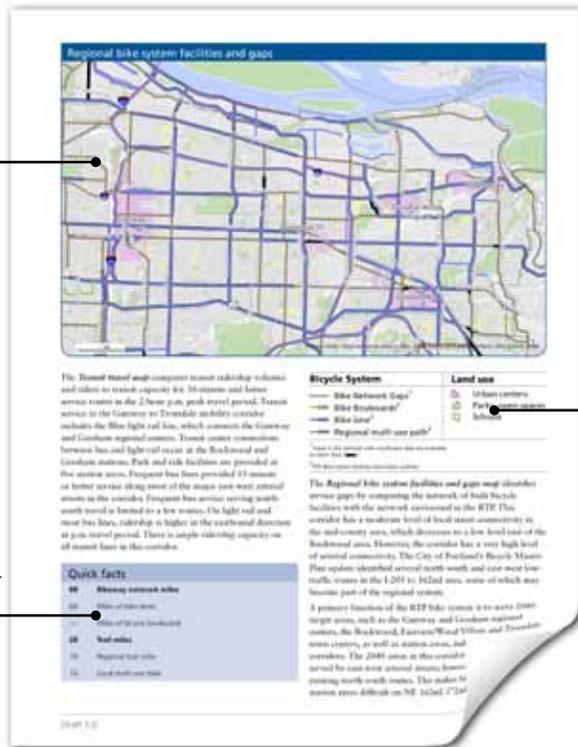


This legend displays the different transit elements in the map above. It shows the symbols used to indicate the different ridership level and the ridership-to-capacity ratio.

The *Employment density* map shows the overall density of households as a color gradient, such that the deeper blue color has a higher density of jobs.

The *Regional bike system facilities and gaps* map displays the different elements of the bike system. It shows existing bike lanes and bike boulevards while also showing where there are gaps in the RTP designated bicycle system.

These quick facts represent a variety of bicycle facility and multi-use path data that has been aggregated based upon the Corridor Analysis Zone for the specific corridor.

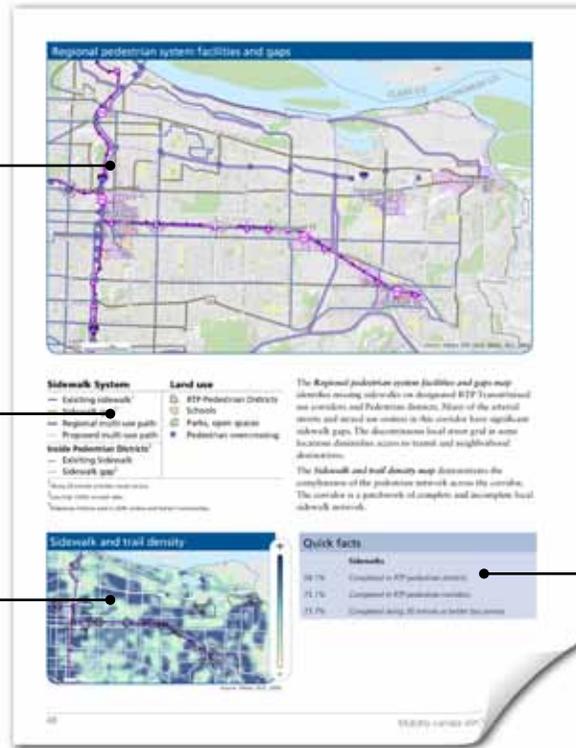


This legend shows the different bicycle facility classifications and the symbology for bicycle facility gaps.

The *Regional pedestrian system facilities and gaps* map displays areas where the sidewalks are not complete on both sides of the road for both the RTP designated pedestrian corridors and also along all 30-minute or better bus routes. The map also displays sidewalk completion within RTP designated pedestrian districts.

This legend shows the different sidewalk facility classifications and the symbology for sidewalk gaps.

The *Sidewalk and trail density* map shows the overall density of sidewalks and multi-use paths as a color gradient, such that the deeper blue color has a higher density of sidewalks.



These quick facts represent a variety of data on sidewalks that has been aggregated based upon the Corridor Analysis Zone for the specific corridor.